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THE CHICAGO MILK INQUIRY

I. ORIGIN OF INQUIRY

The problem of securing an adequate supply of pure milk for cities has for a long time been the subject of serious consideration. This commodity is such an essential food in the dietary of every household, and at the same time is so highly perishable, so easily contaminated, and so dangerous as a medium for carrying disease that the duty to safeguard its purity and wholesomeness has been recognized in most large centers. It is true that the problem has most generally been viewed from the standpoint of sociology. The economic phases of the problem have until recently remained in the background.

So long as there remained large sections of the producing field unexploited, and so long as the distributive organization was on a competitive price basis, the economic problems of milk production and distribution never were acute. Evidences of the impending struggle appeared in the conditions in Boston and New York, where investigations were deemed necessary to break the growing monopolistic power of the milk dealers. It may now be seen that these were only preliminary to the crisis that occurred during the summer and autumn of 1917. This crisis developed in various large cities from the Atlantic to the Pacific, and led to many investigations.

The present discussion, however, will be limited to the situation at Chicago, as representative of the whole movement.

A brief survey of the factors at work to bring on the crisis in the Chicago district will afford a background upon which to throw the details of the inquiry. There are three dominating factors in the situation: first, the rise of the large dealer or distributor in the city; second, the growth of the Milk Producers' Association to a position of control in the "Chicago zone"; and, third, the war. Each main factor has brought minor ones in its train, but these may be discussed incidentally.

Several years ago a very large proportion of milk was distributed to consumers in Chicago by small dealers. Twenty-five years ago there were said to be as many as 2,700 distributors in the city, and in 1906 there were more than 1,300 such distributors. By 1911 the tendency toward concentration was clear. At that time there were ten or twelve large dealers who handled almost two-thirds of the milk coming into Chicago. The rest, it was estimated, was in the hands of between 1,200 and 1,500 small dealers. By 1917 the number of dealers was reduced to 668, and two companies were distributing 40 per cent of the total.

There were several results flowing from this concentration of control. All the savings and economies of large-scale business were secured. At the same time it became possible to offer better service. The large companies sent their own inspectors into the field to help the dairyman protect his herd from disease, to insure against lapses between the rare visits of the municipal inspectors, and to guard as far as possible against infection and contamination at the source. There were better equipment at the country bottling plants, better transportation facilities, and more numerous and better-equipped receiving stations. Along with this growth came also an increased bargaining power. While keen competition in service existed within the city, these large distributing companies made only a single basic offer to the producers. This was not a fixed price, but only another instance of a standard price driven to this common basis by the ruthless competition in service. There came to be known in the trade a "Chicago price."

To match this concentrated control over distribution there arose in the producing area an organization of dairymen. This organiza-

tion is known as the Milk Producers' Association. It has grown by an accretion of local or county associations until today it claims a membership of 16,064. It reaches out into all parts of the Chicago zone; in fact, it consists of the majority of milk producers in this area. While it is not single in its purpose to "fight" the distributors, that is fundamental in securing a unifying motive. Subordinate interest is found in getting a better breed of dairy cows, in determining a balanced ration for the herd, in keeping accounts, and in exchanging ideas on topics connected with the dairy business.[1]

It was in the spring of 1916 that this Association first made its full strength felt. Milk contracts are made in the Chicago district for six-month periods, one running from May to September inclusive, the other from October to April inclusive. Contracts for the first period are called summer contracts; those for the second period are called winter contracts. One of these is the pasture season; the other, the feeding season. Dairies are also classified on this basis into summer dairies and winter dairies. At the beginning of these two contract periods a price is fixed for the ensuing six months. In the spring the price runs on a butter-fat basis, on what is called a "cheap milk" price. The reason for this is that pasture is cheaper than other feed, and that butter is made from the surplus of this season and stored for the winter market. "The surplus is the vital thing with the distributor."[2] These six-month prices must be high enough to cause a sufficient flow of milk to the city, and at the same time low enough to reach the purchasing power of the masses. At the contract-making in April, 1916, the Milk Producers' Association, now fully organized, demanded an increase in price for whole milk, and when their demand was refused proceeded to cut off the supply

[1] Amended Constitution adopted at the Annual Convention, 1914. Constitution of the Milk Producers' Association:

Preamble

SECTION 1.—We the Milk Producers, tributary to Chicago, State of Illinois, believe it to be for our mutual interest to hereby organize the Milk Producers' Association, and agree to be bound by the following Constitution:

Object

SEC. 2.—This association is formed for the purpose of promoting the prosperity of the producers of milk, tributary to Chicago, for mutual protection, and for the general welfare of its membership.

[2] Cf. *Testimony*, pp. 3606–9, and *Distributors' Brief*, p. 4.

for the Chicago market by labor-union methods, i.e., by threat of physical violence, by dumping milk out by the roadside, etc. They got their price, and milk to the consumer rose from 8 to 9 cents per quart.

The next contract period, October, 1916, was passed without more trouble. But in April there was another struggle, a "milk war" it was called, with further threats of boycott. The milk dealers again submitted to the producers' demands; the price to producers rose from \$1.55 to \$2.12 per hundred pounds; the consumer paid 10 cents a quart.

Meanwhile the United States entered the war, and plans for food conservation were prepared. Farm products began to rise in price. A minimum guaranty for the wheat crop of 1917 and 1918 was established by the federal government. A movement was started to encourage the raising of swine by the promise of a price for corn of "1 to 13," that is, a bushel of corn to 13 pounds of pork. Then came the unprecedented frosts in August and September to cut short the corn crop. It was inevitable that milk should be affected along with other foods.

Under these conditions the dealers and producers met to fix the winter milk price to begin on October 1, 1917. The milk producers demanded \$3.42 per hundred pounds, basing their demand upon a theoretical feeding formula which had been presented to a conference of the members of the Milk Producers' Association in August. This formula gave the amount of various feedstuffs and of labor required to produce one hundred pounds of milk.[1]

These amounts were translated into price figures, for "illustrative purposes," as the expert who made the formula declared. On the basis of these illustrative monetary values the "cost" of producing one hundred pounds of milk was calculated at \$3.43, one cent higher than the price demanded by the Association.

The dealers were again forced to accede to the demands of the producers, and signed a contract for the month of October. The

[1] This theoretical formula was made from an average of over 400 records taken from dairy farms in northern Illinois:

Feeding formula on the basis of 100 pounds of milk: grain, 44 pounds; hay, 50 pounds; silage, 188 pounds; bedding, 39 pounds; man-hours, 2.42.—*Milk News* (October, 1917), p. 6.

price to the consumers rose from 10 to 13 cents per quart. Immediately there was an outcry from the consumers. Consumption fell off from 15 to 25 per cent. A survey of typical districts showed a reduction in every economic group. The group most affected was the middle class, who felt the burden of increased price, and could reduce consumption. There was less reduction among the poorer class for the probable reason that these people were already so near the minimum that they could not go much farther. Even the wealthy North Side group was influenced, especially in the use of cream. A brief experience at this price led the Health Commissioner to declare that "a price of 13 cents a quart makes it practically impossible for the average wage-earner to purchase the amount of milk necessary for a family of three or four small children. Even if babies deprived of mother's milk are allowed a sufficient quantity of cow's milk, there is great danger of children between one and five years of age not securing sufficient quantities of milk necessary for their proper nourishment."[1]

The price held firm at $3.42 a hundred pounds to producers and 13 cents a quart (7 cents a pint) to consumers through the month of October. There continued to be, however, an agitation among consumers; various bodies took up the subject, among them the Department of Health and the Committee on Health of the City Council. As the end of the month approached the dealers refused to renew the contract for November. Again a strike was invoked, and the flow of milk to Chicago was stopped by the Milk Producers' Association. At this juncture the state Food Administrator was prevailed upon to take the matter in hand. He called in representatives of the producers and of the distributors for conference on the question.

The conference met in confidential session on November 2, where it was finally agreed by all parties to submit the matter to arbitration. An arbitration commission was to be appointed by the Food Administrator, consisting of representatives of the producers, the distributors, and the public. It was to be the duty of this commission "to name a price at which milk may be sold by producers in the said district [the Chicago district], which price shall

[1] *More Economic Distribution and Delivery of Milk*, p. 7.

cover the cost of production and a reasonable profit thereon."[1] The same principle was to apply to the distributor: there was to be a determination of "the cost of distribution and a reasonable profit to the distributor."[2]

It was further agreed that during the period of investigation the producers should consent to accept $3.22 per hundred pounds, and that the distributors should sell to the consumer at 12 cents a quart. It was also agreed that—

> the price fixed by the Commission is to prevail until June 30, 1918. If the Commission finds that the compromise price of $3.22 is either higher or lower than cost plus a reasonable profit, the Commission will take that fact into consideration in naming the price for the future, and will fix it at such a figure that the excess or deficiency in the compromise price will have been absorbed at the expiration of the award. Similarly, if the Commission finds that the compromise amount allowed to be added by the distributors is either higher or lower than cost, plus a reasonable profit, the Commission will take that fact into consideration in naming the amount to be added for the future, and will fix it at such a figure that the excess or deficiency in the compromise amount will have been absorbed at the expiration of the award.[3]

On the basis of this agreement, which received the sanction of the federal authorities at Washington, the investigation was begun.

II. THE SEVERAL INTERESTS INVOLVED

There were obviously three different interests involved in this controversy: those of the producers, those of the distributors, and those of the consumers.

The producers called in witnesses from all sections of the Chicago district to testify before the Commission. There were practical dairymen, county agents, country bankers, dairy experts, and members of the dairy departments from various agricultural colleges. They all came with a common purpose, to secure higher prices for the milk producers. The entire evidence may be summarized under the following heads:

1. There is now, and has long been, a general lack of prosperity among dairymen. It was often said that the grain farmers or the

[1] *Milk Producers' Brief*, p. 1. For terms of agreement see appendix to this brief.

[2] *Distributors' Brief*, p. 1.

[3] *City Club Brief*, pp. 1–2; *Record*, pp. 5653–76.

cattle feeders in the neighborhood could easily buy out the dairymen. While admitting that a part at least of the Chicago zone was the best dairy region in the United States, and that much of the district was not so well adapted to any other kind of farming, it was declared that the prices obtained for the milk were so low that no money could be made in the business. This had become increasingly the case under war conditions, and the increase from $1.55 to $3.22 per one hundred pounds had not been enough to show a profit.

2. There was a prevailing threat on the part of the dairymen to quit the business and leave Chicago without a milk supply unless higher prices were obtained.[1] Evidence was introduced to show that the dairy business had for years been running upon a very narrow margin, and that for a great part of the time the costs were greater than the returns. In the same period covered by this evidence, however, agricultural colleges were issuing pamphlets on the attractiveness of the dairy business, its efficacy in building up the farm, and the desirability of higher-priced live stock. Also, during the same period, dairy-farm land increased in value, as did also the dairy herds.

[1] Chicago refuses to pay a fair price for milk except under compulsion. Is it worth while to remain in a business in which a constant struggle is necessary to maintain a fair price—in which uncertainty and turmoil are the rule? This is the question that many dairymen in the Chicago district are asking themselves.

Here is what seems to us the logical plan to follow:

Cut down the dairy herd from one-third to one-half, keeping only the best cows.

Put in a liberal acreage of spring wheat. The price is guaranteed at $2.00 a bushel by Congress, and no appointive official can change it.

Keep several brood sows. If you cannot get brood sows, breed now for summer pigs.

Raise some good heifer calves. There is bound to be a scarcity of dairy products and dairy cows later, and there will be a satisfactory profit in raising good heifers.

Buy a cream separator. It will enable you to shift from whole milk to cream or butter marketing at a moment's notice.

We believe it will be to the financial advantage of farmers in the Chicago dairy district to follow this program. Selling the poorer cows will create a scarcity of milk that will bring Chicago to its senses as nothing else can do. The cost of producing milk from the better cows that are left will be lowered. The income from wheat and hogs will help to make the farmer independent of the whole-milk market, and the cream separator will enable him to abandon that market altogether when necessary.—Quoted from "What Shall We Do?" *Prairie Farmer*, in the *Chicago Tribnne*, March 7, 1918.

3. Nearly all the witnesses presented figures to show how much feed had been given to the herd, and what returns had been received thereon. Some attempt at cost accounts had been made. These accounts were kept either under direction of the dairy department at the University of Illinois, or under the tutelage of county agents, or by a representative of the Cow Testers' Association. A few dairymen presented data kept in their own individualistic fashion. On the basis of these accounts the cost of producing one hundred pounds of milk varied from $2.05 to $12.00.[1] No direct testimony, however, was given of a case where the cost was as low even as $3.42, the price which the producers had demanded.

4. Country bankers testified that the dairymen were unable to take up all their notes during the past fall. They anticipated a general request for renewals. They declared that more farmers than usual were selling off their herds with the intention of quitting the dairy business. It was their opinion that there was a decided unrest among the dairymen due to the fact that the price of milk was too low.

5. Calculations in the dairy business may be made, it was stated, upon three different bases: (*a*) the farm as a unit, by which method "the expenses of the farm other than milk are subtracted from all farm expenses, and the difference is called the cost of milk";[2] (*b*) the herd cost, which is "to list all of the receipts from the herd other than milk and deduct those receipts—including manure—from the total cost of keeping the cows and call that cost of milk";[3] (*c*) the cow as a unit, on which basis each dairy cow is treated individually. It may be said in general that the dairymen of the Chicago district consider the herd as the proper unit.[4]

6. There was declared to be also a dire shortage of labor, due to the fact that the low price received for milk did not enable the farmer to compete with munitions and other factories. Many instances were cited of young men leaving the farms and going to nearby factories, where they were receiving extraordinarily high wages.

[1] *Record*, p. 632. As representative of the costs calculated the following are given: $3.68, p. 546; $4.01, p. 587; $3.62, p. 593; $4.22, p. 477; $4.52, p. 471; $7.99, p. 488; $4.43, p. 505; $3.18, p. 803; $5.13, p. 823; $6.44, p. 449; $5.83, p. 2096.

[2] *Producers' Brief*, p. 11. [3] *Ibid.*, p. 11; *Record*, p. 83. [4] *Producers' Brief*, p. 12.

7. Emphasis was placed upon the hardness and unpleasantness of the dairyman's life. His work hours were said to last from four or five o'clock in the morning till seven or eight o'clock at night for seven days in the week. Such a work day as this, of course, left him no time or inclination to "loaf and invite his soul," or in any other way to cultivate the aesthetic faculties. Besides, the women and children were compelled to share in the hardship of this existence.

8. This industry, with its dismal past and its dark future, was often contrasted with other farm enterprises where opportunities for success were assured. The government guaranty for the 1918 wheat crop, the encouragement offered to growers of cattle and swine, it was frequently pointed out, made possible a ready alternative use for farm lands. Therefore, the argument ran, if the dairyman is to stay in the business, it must be made worth his while to keep out of raising grain or live stock. This condition was possible only in case the price of milk was high enough to afford the same returns on marketable feedstuffs as could be obtained under the war emergency if they were sold in the open market.

9. It was suggested, at times, that a fair and satisfactory return would be one to cover the cost of production, which meant the cost of feed, interest on the investment in equipment and herds, depreciation, wages, and an additional 10 per cent for profit.

10. In figuring costs it was held to be a fundamental principle that feedstuffs should be counted in at farm prices, that is, at market price less transportation to markets. This is, of course, consistent with the claim that dairymen should be placed on the war-price schedule for grain plus a fair profit above these war prices. Man labor was to be calculated at 25 cents an hour, or more.

11. Evidence was produced also to show the food values of milk, and the point was stressed that even at the highest price demanded by the producers milk was still a cheap food. Its essential character for the dietary of children made it also imperative that milk be had in pure and wholesome condition.

The distributors entered evidence to show that they were caught between the upper millstone of a consumer marginal price and the nether millstone of the producers' demands. Through keen competition all possible economies under the existing system had been

introduced; profits ran on a very narrow margin; all added costs to producer must be shifted on to consumer; an increased price to consumer reduced consumption and costs rose in consequence. The main points in their evidence were as follows:

1. The dairy business in the Chicago district has a sound economic basis. It is the best dairy region in the world, excellently fitted in topography, soil, and climate. There are two counties alone, McHenry and Kane, in Illinois that could produce enough milk for Chicago. In the states of Illinois, Michigan, Indiana, Iowa, and Wisconsin there are produced annually over 18,000,000,000 pounds. Probably 80 per cent of the milk produced in the Chicago zone goes to the condenseries and not into the whole-milk city market. It is suggested, therefore, that the butter market, that is, the butter-fat basis, is the best basis from which to calculate the price of milk.[1]

2. The distributors produced data to show that the vital problem is the care of the surplus milk. From October to June the flow of milk increases; from June to October the flow decreases. Throughout the year, at a given price, the consumption is relatively constant. The result is that there is a surplus of milk for nine months and a shortage for three months. These shortage months are July, August, and September. In spite of this uneven flow the distributors must deliver day in and day out the volume demanded by the consumer. Thus it comes about that "the surplus is a vital thing with the distributor." Data were offered to show that the increases in price to the consumer in New York and Detroit had piled up an unmanageable surplus in those centers. At the same time the condenseries in these districts were completely loaded up.

3. Much stress was also laid upon the services afforded the consumer by the distributors. The milk, it is said, is carried to the door of the consumer at the time and in the quantity wanted, and this milk is of a quality that is dependable. In sunshine and in rain, summer and winter, in spite of obstacles manifold, the quart or the pint is on the window sill at the time most convenient for the housewife. Competition is on the basis of service.

[1] Cf. *Distributors' Brief*, p. 4.

4. But service is costly, and, since the milk is handled on an extremely narrow margin of profit, the costs must be shifted onto the consumer. For years prices have been down to rock-bottom, so that whenever an increase was made in the price to the producer it became absolutely necessary for it to be carried over to the public. Cost figures were presented from the books of several large dealers to substantiate the claims made. The data given in Table I are taken from the accounts for October, 1917.[1] These four companies, it is declared, run over half the wagons in Chicago, and their costs are probably lower than the others, with the possible exception of certain one- or two-wagon men who carry on their milk business as a family affair.

TABLE I

Dealer	Paid to Producer	Expense	Total	Receipts	Loss
	Cents	Cents	Cents	Cents	Cents
Bowman	7.435	5.575	13.01	12.987	0.023
Borden	7.46	5.96	13.42	13.06	0.36
Kee & Chapell	7.435	5.85	13.285	13.00	0.285
Wieland	7.55	5.605	13.155	13.00	0.155
Average	7.47	5.747	13.217	13.011	0.206

5. Stress is placed also upon the food value of milk. The claim is made that at even the highest price charged the consumer for milk, as in October, 1917, it is still one of the cheapest foods obtainable.

6. It is pointed out, further, that the existing "spread," that is, the difference between the price paid to the producers and the price charged the consumers, is narrower than elsewhere. In Detroit the investigating commission had allowed a spread of 6.72 cents; in New York a similar commission allowed 6.92 cents.[2] At 6.5 cents per quart for the distributors the returns would average only 10 per cent on the investment. A fair spread would be 6.276 cents for the large dealers.[3] Such a demand is amply justified by the increased costs of distribution.[4]

7. A fair profit to the distributors would be a margin above expenses of one-half cent a quart. The unit of calculation among

[1] *Ibid.*, p. 6. [2] *Record*, p. 5760. [3] *Distributors' Brief*, p. 8. [4] *Ibid.*, p. 10.

the distributors is the "point," which is a quart of milk or less at retail, or a gallon of milk or cream at wholesale. This margin would be per "point."[1]

8. The chief contention of the milk dealers was that they should be exonerated from all suspicion of profiteering, and that some relief from the accumulated losses be given by the Commission.

9. They objected also to all proposed changes in methods of distribution, claiming that the existing system secured all the advantages of competitive business, that it was economical, and that all proposed systems were untried and theoretical.[2]

10. It was suggested that it might be wise under the war emergency to abandon the six-month contracts and adjust the price on a monthly basis. This plan would secure a desirable flexibility and make it possible to meet sudden, unforeseen changes.[3]

In the early part of the investigation the consumers had no champion before the Commission. Later the Department of Health produced some evidence to combat the testimony offered by the producers and distributors. Later still the City Club of Chicago undertook an analysis of some of the producers' evidence. The main points of the contention by these representatives of the consumer's interest were as follows:

1. There are two phases of the milk problem. One is the question of supply and demand and the other is a social question. While a fair return is due to producer and distributor, milk *must* be had for babies and children under five years of age.

2. There is no reason why Chicago milk should be confined to the Chicago zone, provided its purity and wholesomeness are sufficiently guarded. And since milk is now selling outside the zone for much less than the price demanded by the producers, much less even than the compromise price of $3.22 per hundred pounds, it is possible to get it from these outside sources at less cost. Steps were being taken by the Department of Health, it was said, to make this supply available.

3. It was further contended by the department that a butterfat basis would be a fairer and cheaper basis upon which to estab-

[1] *Record*, p. 3062. [2] Cf. *Distributors' Brief*, pp. 14–20. [3] *Ibid.*, p. 21.

lish a price. This basis would eliminate the surplus loss to dealers which now exists.[1]

4. With the increase in price to consumers from 10 cents to 13 cents per quart there had been a marked reduction in consumption. Estimates were given of the daily consumption in Chicago. At 8 cents a quart the daily consumption ran close to 1,000,000 quarts, at 10 cents around 800,000, and at 13 cents it had fallen in October to about 584,000.[2]

5. It was also proposed by the Department of Health that a new plan of distribution be arranged for with the Rochester, New York, experiment as a model. The number of distributors was to be restricted, the city was to be divided, or "zoned," and much duplication avoided. A "cash and carry" scheme was suggested by means of which those who desired could go to a milk station and get milk at a reduced cost.

6. Evidence was presented through "field nurses" who had made inquiry as to the effect of the October increase in price. There was found to be a reduction in consumption among the poor families, who were substituting coffee for milk with their children. This was an acute phase of the social problem.

7. The City Club attempted to analyze the cost data of the producers' witnesses. The feeding formulas were examined critically, and the variations and inconsistencies were pointed out. Most of these formulas, it was shown, were so much at variance with one another, or were so unusual or so impossible in character, as to form no proper basis for judgment. Then the principle of calculating feedstuffs at farm price was attacked. It was contended that, since the Commission was appointed to determine the cost of producing milk first of all, the only principle to be followed was the one used in all mercantile and manufacturing establishments. Feedstuffs for dairy cattle were analogous to raw materials or merchandise, and should be counted at cost of production and not at selling prices at the farm. On this basis it was figured that an average cost of producing one hundred pounds of milk in the Chicago district was $2.42. And if to this be added, as a margin

[1] *Record,* pp. 3306–7. [2] Cf. Health Department Exhibit 28.

for profit, an average of the maximum and minimum margins granted by the government in other comparable cases—21.3 per cent—the price to the distributors would be $2.94.[1]

In addition to the foregoing evidence there were sporadic attempts made by representatives of the states attorney's office to introduce certain documents bearing mostly on the acts of the Milk Producers' Association. Since some members of this Association were at the time under indictment for conspiracy in restraint of trade, the Commission held rightly that no evidence should be introduced that could be used later in a criminal case. The purpose apparently was to heckle the witnesses rather than to help the Commission with its problem. At any rate there was no distinct contribution from this source.

It required practically two months, from December 3 to January 31, for the investigation to work itself out. A decision had been promised at the conference, on November 2, by January 1, 1918. When that time came and the evidence was not yet all in, it was mutually agreed that the decision be postponed until such a date that all parties might have a fair hearing. The record lengthened out to 5,874 pages, when at last, late in January, the evidence was all entered. Then the Commission went into confidential session.

III. THE ISSUES AT STAKE

While testimony of a very heterogeneous character was admitted during the hearing, the main points were really made clear by the terms of the arbitration agreement. It would appear simple enough to discover the issues where it had been clearly stipulated that the Commission was to fix the price for milk sold in Chicago on the basis of the cost of production and a reasonable profit to the producers, and of the cost of distribution and a reasonable profit to the distributors. At times, however, it seemed as if the crucial question would be, What is to be the basis of a fair price for milk—the butter-fat basis set by a national market or a 3.5 per cent fat whole-milk basis in the Chicago market? The point soon lost its importance in the hearing, because the principal parties concerned

[1] *City Club Brief*, pp. 19–20.

could not greatly interest the Commission in it. At last it was generally accepted that the whole-milk basis in the Chicago district was the right one, although contentions for the butter-fat basis did appear in the briefs offered by the Department of Health and the distributors.

During the rebuttal to the producers' evidence offered by the City Club, however, the real issues finally became apparent. The entire controversy then resolved itself into the following three simple questions: (1) What is the cost of production? (2) What is cost of distribution? (3) What is a reasonable profit?

Of these three questions the first was of overshadowing importance. The cost of distribution as presented from the records of the five or six largest companies was admitted at face value. Some sharp cross-examination occurred at the time of presentation, but as a whole it went through practically unaffected. This was partly due to the fact that no one was in a position to offer rebuttal, partly to the arbitration agreement that costs were to be figured under existing conditions, and partly also to a promise that a new commission with extended powers would take up the matter of milk distribution.

The percentage of profit to be added to the cost was not of great concern at this hearing, for reasons that will appear in detail presently. The attorney for the producers urged that it had been understood at the time of agreement on November 2 that the "Commission would fix a price upon the cost of production with a reasonable profit, a stimulating profit, a profit that would not only be a normal profit, but a profit that would keep up an increased flow of milk."[1] There was, however, such a precedent in the government's offer to other industries of a 10 per cent margin that no one except the City Club gave a definite higher figure. The criterion offered was in fact a pragmatic one, namely, enough to make the dairymen content to stay in the milk-producing business.

Apparently there would have been no great difficulty in reaching a decision if the question of the cost of producing milk could have been answered satisfactorily. Since this subject was so much of the essence of the inquiry the opposing opinions will be given in

[1] *Record*, p. 67.

considerable detail. The purpose is to present the two sides fairly and clearly in order that the final decision and its effects may be understood more fully.

It quickly developed in the investigation that, whatever the unit taken, the farm, the herd, or the cow, the two chief factors in cost were feed and labor. Practically all other incidental expenses were taken care of by incidental credits. Or if these credits did not offset these debits, a differential percentage on the herd basis —at most 25 per cent—would eliminate them from consideration. These incidental debits are represented by such items as interest on equipment, depreciation, horse labor, veterinary fees, etc.; the incidental credits are such items as calves and manure. This assumes that the milk used in the family is accounted for otherwise.

If feed and labor then are the two chief items, it remains only to reduce them to a common-unit basis and analyze them into ultimate costs. The unit of computation used was one hundred pounds of milk. Feeding formulas were presented on this basis, and man-hours also reduced to the same unit.[1]

Upon analysis the feedstuffs fell into certain classes, as grain and other concentrates, silage and other succulent food, hay, bedding, and other roughage. There were two steps still to be taken: one was to determine the percentage of each ration element in the composite feed per one hundred pounds, and the other was to determine the monetary valuation of each.

This first problem, to determine the percentage of each food element, was made more difficult by the fact that the first-named feed, grain, is not a simple feed, but is itself a composite feed, made up of various combinations of oats, or corn, or barley, and prepared feeds, such as bran, gluten feed, oil meal, etc. There were two ways to meet the difficulties here. One way was to determine from actual usage what was being fed per one hundred pounds of milk; the other was to select a representative formula and use it as a basis of calculation. It was decided to select a formula that had been suggested in Hoard's *Dairyman*. This is called in Table II, "Humphrey's War Ration No. 2." This war ration was as

[1] All available feeding formulas are presented in Tables II and III.

TABLE II

Comparative Statement of Cost of Producing One Hundred Pounds of Milk, Computed from

(City Club of Chicago, January 7, 1918)

	1 *Pearson* Illinois Farmers' Reports (1911–12) (p. 54)	2 *Pearson* Standard Ration (p. 253)	3 *Warren* Average of Mass. (16 yrs.), Conn. (6 yrs.), N.J. (1909) Averages (p. 104)	4 *Warren* Michigan (1914–15), N.Y., Conn., and N.J. Farmers' Reports (p. 149)	5 *Bain* Indiana Farmers' Reports, Nov., 1916, to Apr., 1917 (p. 4134)	6 *Karpis* Nov., 1916 (p. 826)	7 *Bandemer* Oct., 1916, to Mar., 1917 (p. 802)	8 *Barb* Oct., 1 to Mar., (p. 59
Basis used (cow or herd cost)....	Herd	Cow	Cow	Cow	Cow	Herd	Cow	Her
Butter-fat content..............	*	*	4.41%	3.78%	*	*	*	*
Grain and other concentrates....	$0.9438	$0.7508	$0.7509	$0.7079	$0.8816	$0.5759	$0.6471	$0.97
Silage and other succulent food...	0.3760	0.28	0.3024	0.2038	0.3022	0.3076	0.28	0.28
Hay..........................	0.3585	0.2581	0.3427	0.3014	0.4883	0.2753	0.4445	0.37
Total....................	$1.6783	$1.2889	$1.3960	$1.2131	$1.6721	$1.1588	$1.3716	$1.63
Bedding and other roughage.....	0.1365	0.1015	0.0221	0.0396	0.0816	0.3364	0.1785	0.07
Man-hours..................	0.6050	0.59	0.7275	0.7275	0.6590	0.6750	0.4675	0.57
Adjustment percentage (account debits exceeding credits).......	0.00	0.5079	†	0.3960	†	†	0.2623	0.13
Total cost of milk per 100 lbs.	$2.4198	$2.4883	$2.1456	$2.3762	$2.4127	$2.1702	$2.2799	$2.42

* Not stated. † None given.

Unit costs used: Grain (Humphrey's War Ration No. 2): bran, $42.00 per ton; oats, $0.75 per bu. (56 lbs.); gluten feed, $55.00 per ton; oil meal, $6
$7.00 per ton. Man labor, $0.25 per hour.

TABLE III

Comparative Statement of Various Feeding Formulae to Produce One Hundred Pounds of

(City Club of Chicago, January 7, 1918)

	1 *Pearson* Illinois Farmers' Reports (1911–12) (p. 54)	2 *Pearson* Standard Ration (p. 253)	3 *Warren* Average of Mass. (16 yrs.), Conn. (6 yrs.), N.J. (1909) Averages (p. 104)	4 *Warren* Michigan (1914–15), N.Y., Conn., and N.J. Farmers' Reports (p. 149)	5 *Bain* Indiana Farmers' Reports, Nov., 1916, to Apr., 1917 (p. 4134)	6 *Karpis* Nov., 1917 (p. 826)	7 *Bandemer* Oct., 1916, to Mar., 1917 (p. 802)	8 *Barb* Oct., 1 to Mar., (p. 59
Basis used (cow or herd cost)....	Herd	Cow	Cow	Cow	Cow	Herd	Cow	Her
Butter-fat content..............	*	*	4.41%	3.78%	*	*	*	*
Grain and other concentrates (pounds)..................	44	35	40.7	33.0	41.1	26.7	30	45.
Silage and other succulent food (pounds)..................	188	140	151.2	101.9	151.1	153.8	140	144.
Hay (pounds)................	50	36	47.8	42.03	68.1	38.4	62	52.
Total (pounds)................	282	211	239.7	176.93	260.4	218.9	232	241.
Bedding and other roughage (pounds)..................	39	29	6.3	11.3	23.3	96.1	51	22.
Man-hours..................	2.42	2.36	‡2.91	2.91	2.36	2.7	1.87	2.
Adjustment percentage (account debits exceeding credits).......	0%	25.65%	§	20%	§	§	13%	6%

* Not stated. † Amount of bedding not given—see cost statement. ‡ Taken from column 4. § None given.

TABLE II

T OF PRODUCING ONE HUNDRED POUNDS OF MILK, COMPUTED FROM STATEMENT OF FEEDING FORMULAE

(City Club of Chicago, January 7, 1918)

3 *Warren* verage of s. (16 yrs.), n. (6 yrs.), J. (1909) Averages (p. 104)	4 *Warren* Michigan (1914–15), N.Y., Conn., and N.J. Farmers' Reports (p. 149)	5 *Bain* Indiana Farmers' Reports, Nov., 1916, to Apr., 1917 (p. 4134)	6 *Karpis* Nov., 1916 (p. 826)	7 *Bandemer* Oct., 1916, to Mar., 1917 (p. 802)	8 *Barber* Oct., 1916, to Mar., 1917 (p. 592)	9 *Thomas* Nov. and Dec., 1917 (p. 586)	10 *Dougan* Nov., 1917 (p. 453)	11 *Wakeley* Oct., 1916, to Mar., 1917 (p. 504)	12 *Peterson* Oct. and Nov., 1917 (p. 861)
Cow 4.41%	Cow 3.78%	Cow *	Herd *	Cow *	Herd *	Herd *	Herd 4.2%	Herd 3.5%	Herd *
0.7509	$0.7079	$0.8816	$0.5759	$0.6471	$0.9707	$0.9089	$0.7088	$1.3330	$1.4021
0.3024	0.2038	0.3022	0.3076	0.28	0.2888	0.3232	0.4353	0.7060	0.71
0.3427	0.3014	0.4883	0.2753	0.4445	0.3757	0.3313	0.3796	0.2008	0.2366
1.3960	$1.2131	$1.6721	$1.1588	$1.3716	$1.6352	$1.5634	$ 1.5237	$2.2398	$2.3487
0.0221	0.0396	0.0816	0.3364	0.1785	0.0798	0.0525	0.0390	0.1190	0.1645
0.7275	0.7275	0.6590	0.6750	0.4675	0.57	0.7650	1.0250	0.7875	0.74
†	0.3960	†	†	0.2623	0.1371	0.4571	†	0.00	†
2.1456	$2.3762	$2.4127	$2.1702	$2.2799	$2.4221	$2.8380	$2.5877	$3.1463	$3.2532

$42.00 per ton; oats, $0.75 per bu. (56 lbs.); gluten feed, $55.00 per ton; oil meal, $60.00 per ton. Silage, $4.00 per ton. Hay, $14.343 per ton. Bedding,

TABLE III

RIOUS FEEDING FORMULAE TO PRODUCE ONE HUNDRED POUNDS OF MILK, TAKEN FROM THE RECORD

(City Club of Chicago, January 7, 1918)

3 *Warren* verage of s. (16 yrs.), n. (6 yrs.), J. (1909) Averages (p. 104)	4 *Warren* Michigan (1914–15), N.Y., Conn., and N.J. Farmers' Reports (p. 149)	5 *Bain* Indiana Farmers' Reports, Nov., 1916, to Apr., 1917 (p. 4134)	6 *Karpis* Nov., 1917 (p. 826)	7 *Bandemer* Oct., 1916, to Mar., 1917 (p. 802)	8 *Barber* Oct., 1916, to Mar., 1917 (p. 592)	9 *Thomas* Nov. and Dec., 1917 (p. 586)	10 *Dougan* Nov., 1917 (p. 453)	11 *Wakeley* Oct., 1916, to Mar., 1917 (p. 504)	12 *Peterson* Oct. and Nov., 1917 (p. 861)
Cow 4.41%	Cow 3.78%	Cow *	Herd *	Cow *	Herd *	Herd *	Herd 4.2%	Herd 3.5%	Herd *
40.7	33.0	41.1	26.7	30	45.0	42.6	32.86	61.8	65
151.2	101.9	151.1	153.8	140	144.4	161.6	217.64	353.0	355
47.8	42.03	68.1	38.4	62	52.4	46.2	52.94	28.0	33
239.7	176.93	260.4	218.9	232	241.8	250.4	303.44	442.8	453
6.3	11.3	23.3	96.1	51	22.8	15	†	34	47
‡2.91	2.91	2.36	2.7	1.87	2.28	3.06	4.1	3.15	2.96
§	20%	§	§	13%	6%	19.2%	§	0%	§

ement. ‡ Taken from column 4. § None given.

follows: grain mixture No. 2: bran 300 lbs., oats 300 lbs., gluten food 300 lbs., oil meal 100 lbs., total 1,000 lbs.[1]

In this way a working formula was secured. It should be noted, however, that this formula was neither in accord with the formulas presented by certain dairymen, nor was it acceptable to the representatives of the producers' interests, but it was admitted by experts as being a fair and reasonable one. Besides, there was such great variation in the feeding formulas given that it was not possible to use any one of them as a basis. A glance at the feeding formulas will show that the totals for feedstuffs range from 211 pounds to 453 pounds for each one hundred pounds of milk. No average or mode drawn from these figures could have been satisfactory. An arbitrary feeding formula backed by the judgment of dairy experts from a source independent of the hearing was therefore chosen.

The final step was to translate the feed and labor formula into cost figures. Out of the effort to do this grew the essential issue in the case. Should the feedstuffs grown on the farm be counted at farm price, that is, market price less the cost of carrying them to market, or at the actual cost of producing them? This question was to be answered on the basis of principle and not of fact. Two absolutely contrary views were held on the question. The main lines of argument will be shown in the succeeding paragraphs.

The producers who contended for the so-called farm price claimed as authority for their position the Department of Agriculture and all the schools of agriculture that have installed courses in agricultural accounting. Their position is probably best expressed by the following excerpts that were introduced into the record:

> No subject seems to be more generally misunderstood than the relation of crops to stock. The usual theory seems to be that if corn and hay can be easily and cheaply grown, they should be fed to live stock. Perhaps the basis of this error is the absurd practice of some institutions of charging feed to animals at the cost of producing it, rather than at what it can be sold for, less the cost of marketing.[2]
>
> The cost has nothing to do with the value. The farmer who produced it hay] at a cost of $5 might feed it to steers and get $8 for it; by this means

[1] Hoard's *Dairyman* (December 7, 1917), p. 690.

[2] G. F. Warren, *Farm Management*, sec. 45, p. 55.

he could make a profit on two things, and steers might be hailed a very profitable enterprise. This sort of figuring misleads some farmers. If hay is worth $15 a ton on the market a farmer is very foolish to sell it to steers for $8, no matter what it cost him. It would be equally unwise to sell it if he could feed it to cows and get $16 for it. If the man whose hay costs him $25 can get only $16 for it by feeding it to cows, he will lose money on the two enterprises but he should not blame the cows for his loss. Every crop should be disposed of in the way that will pay best, regardless of the cost of producing it. . . . . A completely finished product that is ready for market, readily marketable, when it enters into the production of a second product should be charged at what it would sell for on the market. Hay is a standard salable product in New York, one of our most important products of the farm. It may be sold for the city market, fed to horses, sheep, cows. It is as completely finished as milk. In determining whether to feed it or not, farmers take into consideration the terms or price for which they can sell it.[1]

Following the line of this argument, the producers held that all feedstuffs, whether purchased or grown, should enter into the cost of producing milk at market price. Some of the experts who held to this theory admitted that where the feeds grown on the farm were not marketable it would be necessary to charge them at cost of production.[2] It was further admitted that much of the feedstuffs grown was not of a marketable character.[3] In the figures presented by the dairymen, the feeds were charged at the full market price, no attempt being made to determine a farm price.

To refute this argument it was contended that the theory was wrong, and that the more advanced practice among all manufacturing and mercantile establishments was against it. The essence of this opposing argument was as follows:

The proper principle in the production of any article of the finished kind is to charge all materials that enter into that article at their cost. In the case of milk, grain and forage that is raised to be fed to the cows corresponds to raw materials used by the manufacturer. The fact that incidentally they have a market value before they are consumed is not germane; it is immaterial. The dairyman is engaged in the production of a finished thing which he proposes to sell, and the character of the materials which he uses is a matter of indifference. He is not a speculator in their values. . . . . The reason for the principle grows out of the very meaning of the word cost, and the cost of the finished product is the accumulated cost of the material and labor that have

[1] G. F. Warren, before New York Commission.

[2] *Record*, p. 5489. [3] *Ibid.*, p. 5356.

entered into it. Unless you enter cost in that way it is impossible to know the profit of any business.[1]

When it is remembered that grain prices were running on a war basis, that there was a wheat-price guaranty, an indirect corn-price guaranty, for the purpose of stimulating the production of these grains and pork to the highest possible point, the significance of these opposing theories in computing the cost of producing milk will be more fully appreciated. The producers' theory held that feedstuffs, entirely apart from the profit or loss in the actual feeding to cows for milk production, must return an amount of profit as feed equal to what could be had from growing grain for the market, and that besides this a proper return should be assured on the dairy enterprise itself. This they called cost of production plus a reasonable profit. The contrary theory held that the dairy farm was a single business unit, and that the only way to find cost of production was to eliminate all possibility of profits or losses being concealed in the market-price calculation. Costs are costs and profits are profits, and they should not be confused.

As the hearing drew to a close all other points seemed to fade in importance compared to the acceptable theory of figuring costs. There was, to be sure, some difference of opinion as to the charge to be made for labor. Claims were made for 25 and 30 cents an hour. The differences in this item, however, would affect the final figure so slightly that it was not felt to be of much weight.

With this great mass of testimony before it, and with the main issue thus definitely isolated, the Commission began its task of framing a decision. Since there were different interests purposely represented on the Commission, it was not to be an easy matter to harmonize the interests of all parties concerned.

IV. THE DECISION AND ITS EFFECTS

On February 2 the decision was finished and sent in an open letter to the state Food Administrator. Only six out of the nine commissioners concurred in the majority opinion; of the other three, one directly opposed the decision, and the two remaining attempted to put forth another solution. Since the majority opinion controlled

[1] Cf. *City Club Brief*, p. 8; *Record*, p. 5521.

in the case, its provisions are most important. The best summary of the principles which lie at the basis of the decision is given in a review made by the Commission on February 21.

The price to the producers is predicated on the following basis:

1. The average monthly price which the producer received for his product over an eight-year period, representing the cost of production and a reasonable profit.

2. A ratio of the principal elements entering into the production of milk based on their relative proportion to the total cost of production.

3. The application of the increase in the price of these elements for the month of November, 1917, to the average price of the eight-year period above mentioned to determine the increased cost of production and profit for November, 1917, over November of the eight-year period.

4. The application of the same percentage increase as prevailed in November, 1917, to the average price received in the eight-year period for the months of December, January, February, March, April, May, and June, fixing thereby the price to the producer for the months of November and December, 1917, and January, February, March, April, May, and June, 1918, with the same increase over the eight-year period that prevailed for the month of November, 1917.

This meant a rejection of both theories of cost of production presented before the Commission. The reason offered for this rejection was the "inability to determine either cost of production or market price of *all* items of feed and quantities of each." In searching for some alternative basis it was decided to use a "normal" period of time before any violent disturbances in the market. This period was found in the years 1908–15.

It would appear from the testimony that the dairy industry in the Chicago district had been a reasonably successful industry during a normal period of eight years preceding the war period. Lands had increased in value—improvements had occurred. The financial worth of those engaged in the industry had materially improved. That profits had not been excessive is indicated by the normal increase in supply to fill the demand. Because of the nature of the industry, had profits been excessive an over-supply would have followed; had they been unsatisfactory a shortage would have been the result.[1]

The Commission then established the ratio of feeds and labor on a 100 per cent basis as follows:

19 per cent home-grown grains,
19 per cent mill feeds,
35 per cent hay,
27 per cent labor,

[1] *Report of Commission*, pp. 1–2.

for each 100 pounds of milk produced. An average monthly price for the eight-year period was then figured from the actual *market* quotation, and also for November, 1917. This meant an increase in price in November, 1917, of 179 per cent for corn, 81.1 per cent for mill feeds, and 40 per cent for hay, and labor was estimated to have increased 50 per cent. If this increase in percentage be added to each item in the original formula, corn becomes 53.01 per cent instead of 19 per cent, mill feeds become 34.41 per cent instead of 19 per cent, hay 49 per cent, and labor 40.50 per cent. These percentages added together give a total of 177 per cent for the original 100 per cent. The formula is then ready to apply. The average November price for milk for the eight-year period, $1.768, representing 100 per cent, the price for November, 1917, is to be obtained by multiplying this figure by 1.77, which gives $3.13 as the proper price for this month. By the same method the price for each of the other eight months was determined: December, $3.20; January, $3.15; February, $3.07; March, $2.83; April, $2.49; May, $2.04; June, $1.80.

Item	Eight-Year Period	November, 1917
	Per 100 pounds	Per 100 pounds
Corn	1.107	3.089
Mill feeds	1.306	2.3655
Hay	0.557	0.750

It was decided, however, that since the months of November, December, and January were already passed, and payment had been made on the basis of the compromise price, $3.22, it would not be wise to disturb this situation. The Commission's prices, therefore, were to begin with February and run through June. Obviously there was no attempt to determine a price that would absorb any profits or losses that had accrued during the three months under the compromise price. According to the Commission's formula the producers were given a margin of "pure velvet" in November of 9 cents per hundred pounds, in December 2 cents, and in January 7 cents.

On the basis of this scale of prices to the producers the Commission had reduced the price paid by the distributors very

substantially. Nevertheless they were convinced from the evidence that this reduction should be absorbed by the distributors, and that the price to consumers should remain at 12 cents.

> The Commission finds from the statements of the three largest and most efficient dealers the average cost of distribution to be $5\frac{3}{4}$ cents per quart. They contended for a profit of $\frac{1}{2}$ cent per quart as reasonable, which would make their cost and profit $6\frac{1}{4}$ cents per quart. The price hereafter recommended for retail bottled milk delivered will allow the dealer 6.1 cents per quart, and for retail bottled milk, on cash and carry plan from dealers' stations, 4.1 cents per quart.

There were other suggestions in the decision, more or less incidental in character, such as a recommendation that the food value of milk be emphasized through popular education, and that the producer co-operate with distributor in reducing costs by more economical hauling methods. The essential point, however, is contained in the setting of prices. Since the Commission had no power to institute changes either in production or distribution, it seems probable that these suggestions constitute only a mild criticism on certain uneconomic practices.

The effect of this decision was immediately evident. It was not acceptable to the producers. Their champions on the Commission had failed to ratify it, and a number of them at once announced their refusal to abide by its terms. Milk was not to be sold to the Chicago dealers at the Commission's price. A boycott was begun; the supply dropped down for a few days to a small percentage of normal. Some dealers in their efforts to get milk for their customers had it shipped in at great expense from outside the zone. One company brought a supply for several days from New York state; part came from St. Louis. The officers and leaders of the all-powerful Milk Producers' Association were, however, pledged in the arbitration agreement to abide by the decision and to work for its acceptance among the dairymen. This prevented any widespread, co-ordinated effort to boycott. A delegation appealed to the state Food Administrator, who declared that he was unable to go back of the decision made by the Commission, that there was no compulsion on the producers to sell milk in the Chicago market,

that they were free to sell it, feed it to hogs, use it for butter, or do anything else with it that seemed best to them.

The unrest among producers did not subside, although a larger and larger supply of milk came pouring into the Chicago market as the days drifted by. Indignation meetings were held at centers throughout the zone. Then two other men were called in to review the findings of the Commission. They were representatives of the federal Food Administration. An extra session of the Commission was also called to review the case. In answer to the call one Commissioner, Dean of the College of Agriculture at the University of Illinois, seceded from the Commission and sent a long open letter to the state Food Administrator criticizing its findings, and especially the principles used in the determinations.

On February 21 the Commission met for review, minus four members, the three representing the producers, and one other who was detained by illness. A report was drafted reaffirming the conclusions of the first decision, and declaring that no evidence had been produced to show its unfairness, and that "the principles for computing the prices had been unanimously adopted by the entire Commission at the first decision." For the month of February the price to producers as set by the Commission held.

Agitation, however, was kept up by the producers, and the Commission, augmented by the two special delegates from Washington, continued their efforts to reach a satisfactory adjustment. At a meeting of various representatives on March 1 an agreement was made with the producers to the effect that they were to get $3.10 per hundred pounds for the month, instead of $2.83 as determined by the first finding. The distributors agreed to pay this price and to deliver to the consumer at the old price of 12 cents per quart. This new figure was arrived at by a use of the same principle the Commission had adopted, but by employing a higher differential percentage. The original calculation had been 177 per cent of the 1908–15 average; it was now made 181 per cent, owing to the continued rise in the price of feedstuffs. It was further agreed that this sliding scale should hold until July 1. The price for the succeeding month was to be determined on the basis of the

prices published by the Department of Agriculture on the fifteenth of each month.[1]

Thus the matter stands. It cannot be called settled. Unfortunately considerable ill feeling has been engendered and old animosities have been revived. One political phase probably accounts for a good share of the discontent. It is the relation between the Milk Producers' Association and the milk dealers. For years there has been one dominating price in the Chicago zone. This was set on "bargaining day" twice a year by the largest distributor at its bottling plants in the country. The other dealers waited for this price and offered the same. To meet this single offer, which the producers might well believe was the result of collective bargaining on the part of the dealers, there was formed the Milk Producers' Association. There had been several sporadic and abortive attempts to organize the producers, but not until the present Association was begun some ten years ago was there attendant success. As has been said, this Association grew by an accretion of local and county organizations until now it claims a membership of 16,064 and ramifies the entire district. In the spring of 1916, on "bargaining day," it first felt itself strong enough to do collective bargaining on its own account. It succeeded in gaining its demands, succeeded again on spring bargaining day, 1917, and was only stopped in enforcing further demands in the autumn of 1917 by this inquiry.

It is clear that the eight-year period which formed the basis for the Commission's calculations did not include this period of success for the producers. The basis was fixed rather on the period when the producers felt that they were suffering from the one-sided collective bargaining by the dealers. This in itself is reason for discontent. But the feeling would naturally be greatly intensified when the dealers' demands were fully granted by the Commission.

But aside from this political phase the decision leaves the Commission open to criticism because by rejecting both principles

[1] A representative of the United States Food Administration completed a review of the decision and established prices to producers as follows: March, $2.90 per 100 lbs.; April, $2.65; May, $2.05; June, $1.80. This finding kills the March allowance of 21 cents asked for to recoup December and February losses.

proposed for determining costs it was forced to dismiss all the testimony of experts and practical men on both sides. The principle of the eight-year period admits all the hidden profits in the market-price theory, but fails to satisfy the producers by rejecting present market prices. The advocates of the cost-of-production theory feel that the eight-year basis is not in itself scientific, that it does not obviate any of the difficulties in finding accurate data, and that it does not achieve the purpose of the Commission, i.e., to find the cost of production. One chief difficulty with this pragmatic method of deducing the principle is that, no matter what the attitude of the producers was or should have been toward the price of milk paid during those eight years, today they believe it was too low. They have been told this with increasing frequency and force by agricultural experts. Furthermore, the final result of this prolonged inquiry is not the adjustment of a delicate situation but an intensification of feeling. The Commission has been put on the defensive by its own decision.

V. CONCLUSION

As a problem in price-fixing the Chicago milk inquiry has general economic interest. Dairymen own farms that have a ready alternative use. They expect to run those farms upon a commercial basis, to do with them what pays best. If they are not assured as much profit as they think they could have gained, or as they think they may gain, from raising grain or live stock, they threaten to quit the dairy business. The prices of grain and live stock were purposely set at a stimulating level. Is it fair and just to put dairying on the same basis? As a practical proposition, is it necessary?

The investigation also shows the great difficulty in attempting to set the price of a finished product while leaving the materials from which it is produced, and which have other uses, uncontrolled. The government had given the farmers assurance that feedstuffs would be lower in the winter than they were last fall. As a matter of fact they continued to rise. Cotton-seed meal, and certain flour-mill by-products were checked in January, but the general feeding

cost went on up. The fundamental difficulty was probably due to the overestimation of the corn crop.

For the first time possibly the two theories of figuring costs have clashed in a matter of great significance. It may be a surprise for accountants to learn how widespread is the market-price theory. There could hardly be a set of circumstances where the use of this theory shows its effects more clearly. Obviously what the producers were asking for was not cost of production, but a guaranty of market price for their entire crop of feedstuffs. It was equally evident that their accounts on this basis even showed such variation as to invalidate them. Surely the responsibility for this whole situation must be shouldered by the agricultural schools and county agents. It may now be time to take account of the differences between mercantile and agricultural economics.

Finally, it is much to be regretted that the outcome of the Chicago milk inquiry was not more satisfactory. Considerable attention had been centered upon it. Broad principles were expected to be developed that would be applicable elsewhere. There had been the hope too that such a thorough investigation might bring about a better undertsanding among the three parties chiefly concerned. It is much to be doubted whether any one of these things was achieved. Certainly no one of these parties is entirely satisfied.

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